STUDY TO ASSESS THE EFFECTIVENESS OF GUIDED IMAGERY ON REDUCTION OF PAIN AMONG POST OPERATIVE CHILDREN IN SELECTED HOSPITAL AT KERALA.

A DISSERTATION SUBMITTED TO THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY, CHENNAI IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

APRIL 2011

STUDY TO ASSESS THE EFFECTIVENESS OF GUIDED IMAGERY ON REDUCTION OF PAIN AMONG POST OPERATIVE CHILDREN IN SELECTED HOSPITAL AT KERALA.

Ms. SUSAN THOMAS

A DISSERTATION SUBMITTED TO THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY, CHENNAI IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

APRIL 2011

MATHA COLLEGE OF NURSING,
(Affiliated to TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY)
VAANPURAM, MANAMADURAI – 630 606
SIVAGANGAI DISTRICT, TAMILNADU.

CERTIFICATE

This is the bonafide work of **Ms. Susan Thomas,** M.Sc., Nursing II year student from Matha College of Nursing, Matha Memorial Educational Trust, Manamadurai, submitted in partial fulfillment for the Degree of Master of Science in Nursing, under the Tamilnadu Dr. M.G.R. Medical University, Chennai.

Signature : _____

Prof.Mrs. SHABERA BANU, M.Sc., (N) Ph.D.
Principal Cum HOD, Maternity Nursing,
Matha College of Nursing,
Manamadurai.

College Seal :

APRIL 2011

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APPROVED BY THE DISSERTATION COMMITTEE ON : _____

PROFESSOR IN NURSING RESEARCH : _____

Prof.Mrs. SHABERA BANU, M.Sc., (N) Ph.D.
Principal Cum HOD, Maternity Nursing,
Matha College of Nursing,
Manamadurai.

CLINICAL SPECIALITY EXPERT : _____

Prof.Mrs. KALAIGURUSELVI ,M.Sc(N),RNRM
Vice Principal Cum HOD,
Dept. of Pediatric Nursing,
Matha College of Nursing, Manamadurai.

MEDICAL EXPERT : _____

Dr. P.Y. HENRY, M.S., M.Ch., D.N.B., F.M.A.S.
(Lap)Dip.Sono.
Prof. of Pediatric Surgery,
Sarala Hospital, Trivandrum, Kerala

A DISSERTATION SUBMITTED TO THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY, CHENNAI IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING.

APRIL 2011

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Psalms 27:11.

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APPENDIX - I

LETTER SEEKING EXPERTS OPINION FOR CONTENT VALIDITY OF THE TOOL

From

Ms. Susan Thomas
M.Sc., Nursing II year,
Matha College of Nursing,
Manamadurai,
Sivagangai District.

To

Prof. Mrs. Shabera Banu,Msc (N),
Principal,
Matha college of Nursing,
Manamadurai,
Sivagangai District.

Respected Madam,

Sub : Requisition of expert opinion and suggestion for content validity of the tool.

I am a second year M.Sc., (N) student in Matha College of Nursing, Manamadurai. In partial fulfillment of Msc (N),I have selected the topic for the research project to submit to the **Dr. M.G.R. Medical University, Chennai.**

Statement of the problem:

"A study to assess the effectiveness of guided imagery on reduction of pain among post operative children in selected hospital at Kerala**."**

I requesting you to kindly validate the tool and give your expert opinion for necessary modification and also I would be very grateful if you could refine the problem statement and objectives.

Thanking you.

Yours faithfully,

Encl:

- Statement of the problem.
- Objectives.
- Research tool.
  - Demographic variables
  - Tool for assessment of pain scale (FLACC)

APPENDIX-II

LIST OF EXPERTS CONSULTED FOR THE CONTENT VALIDITY OF RESEARCH TOOLS

1) **Dr. P.Y. HENRY, M.S., M.Ch.,**
Prof. of Pediatric Surgery,
Sarala Hospital, Trivandrum,
Kerala.

2) **Prof. Mrs. Malligaarajadurai, M.Sc., (N),**
Principal Cum HOD, Pediatric Nursing,
Sara College of Nursing,
Darapuram.

3) **Prof. Mrs. SHABERA BANU, M.Sc., (N),**
Principal Cum HOD, Obstetrics and Gynecological Nursing,
Matha College of Nursing,
Manamadurai.

4) **Prof. Sr. SOBITHA, M.Sc., (N),**
Vice-Principal Cum HOD, Psychiatric Nursing,
St. Joseph's College of Nursing,
Anchal, Kerala.

5) **Prof. Mrs. SARASWATHI, M.Sc., (N),**
Professor, Dept. of Pediatric Nursing,
Matha College of Nursing, Manamadurai.

APPENDIX III

LETTER SEEKING PERMISSION TO CONDUCT STUDY AT SARALA HOSPITAL, TRIVANDRUM, KERALA.

Matha College of Nursing,
Vaanpuram,
Manamadurai – 630 606.

Principal Date : …

Letter seeking permission to conduct study at Sarala Hospital, Trivandrum, Kerala.

To

Dr. P.Y. HENRY, M.S., M.Ch., D.N.B., F.M.A.S. (Lap)
Dip. Sono., Prof. of Pediatric Surgery,
Sarala Hospital, Trivandrum, Kerala.

Respected Sir,

Sub : M.Sc., Nursing student of Matha College of Nursing, Manamadurai – Seeking permission to conduct a study in your hospital – reg.

I am to state that Ms. Susan Thomas one of our final year M.Sc., Nursing student has to conduct a project, which is to be a partial fulfillment of University requirements for the Master Degree of Science in Nursing.

The topic of research is “Study to assess the effectiveness of guided imagery in reducing pain among post operative children in selected hospital at Kerala”.

Kindly permit her to do the research work in the hospital under your valuable guidance and suggestion.

Thanking you,

Yours Sincerely,

(Prof. Mrs. SHABERA BANU)
Principal

APPENDIX-IV

PART-I

DEMOGRAPHIC VARIABLES

1. Age

a. 6-8 years

b. 8-10 years

c. 10-12 years

2.Sex

a. male

b. female

3.Education

a. l^{st} -3^{rd} std

b. 3^{rd} -5^{th} std

c. 5^{th} -7^{th} std

4. Education for parents

a. illiterate

b. higher secondary

c. diploma

d. post graduate

5. Post operative day

a. 2^{nd} day

b. 3^{rd} day

c. 4^{th} day

6. Type of surgery

a. minor surgery

b. major surgery

PART-II

FLACC SCALE

Categories	0	1	2
Face	No particular expression or smile	Occasional grimace or Frown with drawn disinterested	Frequent to constant frown, grieving chin, clenched jaw
Leg	Normal position or relaxed	Uneasy, restless tense	Kicking or leg drawn up
Activity	Lying quietly, normal position, moves easily	Squirming, Shifting back and forth, tense	Arched, rigid or jerking
Cry	No cry (awake or a sleep)	Moans or whimpers occasional complaint	Crying steadily, screams or sobs, frequent complaint
Consol ability	Contents, relaxed	Reassured by occasional touching hugging or being talking to distraction able	Difficult to console or comfort

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CHAPTER –I

INTRODUCTION

"Children are the heritage and reward from the Lord," Psalm 127:3.

"Children are the inheritance from the Lord. The fruit of the womb is a reward. Our sons may be as plants grownup in their youth. Our daughter may be as pillars sculptured in palace style." (Bible).

Guided imagery is the use of relaxation and mental visualization to improve mood and / or physical well being .The connection between the mind and physical health has been well documented and intensively studied. Positive imagery can promote relaxation and reduces stress, pain which is controlled by the autonomic nervous system.

Guided imagery is a simple tool which can empower you to become a participant in your own healing. It involves the conscious of your imagination to create positive images in order to bring about healthful changes. While it cannot replace other medical treatment. Guided imagery may be useful accompaniment to restoring good health.

Imagery is flow of thoughts you can see, hear, feel, smell or taste. An image is on inner representation of your experience on your fantasies a way your mind codes stores and express information.

Guided imagery is a program of directed thoughts and suggestions that guide your imagination towards a relaxed, focused state you can use an instructor, tapes, or scripts to help you through this process.

Guided imagery seems to respond as though what you are imaging is real. An example often used is to imagine an orange or a lemon in great detail the smell, the color, the texture of the peel. Continue to imagine the smell of the lemon, and then seen yourself taking bite of the lemon and feel the juice squiring into your mouth. Many people salivate when they do this. These exercises demonstrate how your body can respond to what you are imaging.

You can achieve a relaxed state when you imagine all the details of safe. Comfortable place such as a beach or a garden. This relaxed state may aid healing, learning, creativity and performance. it may help you feel more control your emotions and thought process ,which may improve your attitude health sense of well-being.

Guided imagery and relaxation have been shown by improve the post operative course of surgical clients. Children have successful used hypothesis imagery to significantly reduce the pain associated with invasive procedure and to improve selected medical condition. Fifty two children were randomly assigned to an experimental or control group. The experimental group was taught guided imagery by the investigator practice of the imagery technique include suggestions for a favorable post –operative cause.

Chronic pain has affected million of Americans. It is defined as pain that has lasted longer than six months. Generally, it does not respond well to treatment and is a source of discouragement for both the patient and the health care provider. It can

affect all aspects of an individual's life, ranging from home and work for special activities.

In ancient and modern times in both east and west, the use of guided imagery for visualization has been a cornerstone of many healing methods. The earliest visualization technique ever recorded are from Babylon and Samaria. Histories of all peoples from ancient Egypt and Babylon through the middle ages and right up to modern times, includes accounts of healing and those all incorporate visualization in one form or another.

The person who is experiencing chronic pain is often over whelmed by the intensity and/or duration of discomfort, as well as emotions such as depression that accompany.

The tapes and/or videos may be purchased through many medical supply stores, book stores or through physicians or other practioner who specialize in the field of pain management. They are available in varying forms. Some guide the individual through a state of deep relaxation to produce a significant reduction in the amount of discomfort one feels.

Pain is pediatric has historically been understand. Study after finds that are treat pain less aggressively in the pediatric client because we are afraid of the side effects of medications or we just do not believe that they are in pain because they do not "look like" they are very good at assessing pain but research does not support this belief.

NEED FOR THE STUDY;

"It is very great to see when a baby smile"

Guided imagery is simple the use of one's imagination to promote mental and physical health. It can be self-educated, where the individual puts himself into a relaxed state and creates his own images or decided by others. When directed by others and individual listen to a therapist, video or auto taped exercise that leads him through a relaxation and imagery exercise. Some therapist also uses guided imagery in group settings.

Guided imagery is a two part process. The first component involves reaching a state of deep relaxation through breathing and muscle relaxation techniques. During the relaxation phase, the person closes her eyes and focuses on the slow, in and out station of breathing or she might focus on relaxing the feelings of tension from her muscle, staring with the toes and working up to top of the head. Relaxation tapes often feature soft music or tranquil, natural sounds such as rolling waves and chirping birds in order to promote feelings of relaxation.

Once complete relaxation is achieved the second component of the exercise is the imagery of visualization itself. There are a number of different types of guided imagery techniques, limited only by the imagination. Some commonly used types include relaxation imagery, healing imagery, pain control imagery and mental rehearsal.

There are three types of pain pure psychogenic pain which is rare, pure organic pain which does not exist and combined pain which is common. In the treatment of

post operative patients the psychological factor can be taken care of, by diverting the child's mind from thinking about the pain, using guided imagery and hypnosis can supplement the physic action of reducing the pain and it can contribute to make hospitalization a pleasant memory by designing and providing play for the child**. (MEINHARY, 2001).**

Distraction techniques were designed to focus the child's attention away from the present situation and to something less threatening. Distraction technique includes use of CD's, pictures and stories.

Pain is the "Passion of the soul", while our notions of pain may not may quite as romantic as it is important for us to recognize the constructive function of pain. Pain is a body mechanism of self preservation. **(ARISTOTLE).**

Pain is an unpleasant experience associated with tissue damage that queues following a surgical intervention. In hospitals the children who are attending the surgical ward, 60% of them are advised to undergo surgical intervention. Sources of pain for hospitalized child occur as a result of painful procedure, surgery, illness or injury.

There are multiple techniques available to treat pain in children. Pain treatments however should also include behavioral methods, distraction, distracting relations; guided imagery, hypnosis and specific stress reducing counseling are all helpful in the management of pain. Members of behavioral techniques have been found to be very effective in the management of pain in children. This group of techniques should be considered essential in any plan for pain management.

Since this method is effective in the management of post operative pain in children instead of the pharmacological treatment, so the investigator taken this for the study.

STATEMENT OF THE PROBLEM

"A study to assess the effectiveness of guided imagery on reduction of pain among post operative children in selected hospital at Kerala."

OBJECTIVES

- To assess the level of post operative pain before guided imagery among children in selected hospital at Kerala.
- To assess the level of post operative pain after guided imagery among children in selected hospital at Kerala.
- To find out the effectiveness of guided imagery on reduction of pain among post-operative children.
- To associate the level of pain and selected demographic variables of post operative children such as age, sex, education, parent's education, post-operative period, type of surgery.

Hypotheses;

- The mean post test pain level score will be significantly lower than the mean pre test score among post operative children.
- Their will be a significant association between post operative pain level among children and selected demographic variables such as age, sex, education, parent's education, post-operative period and type of surgery.

Operational Definition;

Guided Imagery:

In this study it refers that the children were asked to tell the story by seeing the pictures and CD's. Shown by the researcher.

Effectiveness:

In this study it refers to the extent of pain reduction after giving guided imagery as measured by FLACC scale.

Pain:

It refers to the response of discomfort and distress experienced by the clients on 2^{nd} ,3^{rd} and 4^{th} post operative days as measured by FLACC scale (face, leg, activity, cry and consol ability)

Post operative children:

Children those who are in the post operative ward on 2^{nd} ,3rd and 4^{th} day.

ASSUMPTION;

- Pain will be reduced after giving guided imagery.
- Guided imagery is one of the best interventions to reduce the pain.

LIMITATION;

- Study will be limited up to 60 samples.
- Study period is limited up to 6 week.

PROJECTED OUT COME;

- This study will help to assess the level of pain in post operative children after guided imagery.
- This study finding will be helpful in reducing post operative pain for children using guided imagery.

CONCEPTUAL FRAME WORK

A conceptual frame work or model refers to concept that structure or effect or offer a frame work of preposition form conducting research.

The conceptual framework of this study is based on widen Bach's prescriptive theory. Clinical nursing –A helping art (1969).

Ernestine Wieden Bach is a nurse theorist who later qualified as a nurse midwife proposed a prescriptive theory. Prescriptive theory may be described as one that conceptualizes both a desired situation and the prescription by which it is to be brought about. Thus prescriptive theory directs action toward an explicit goal. Here a preposition is developed based on a central purpose and it is implemented according to the realities of a situation.

Central purpose:

It refers to which the nurse want to accomplish through what she does is the overall goal toward which she is striving and is constant.

In the present study the central purpose is

1. To understands the level of post –operative pain among children.
2. To determine the effectiveness of guided imagery on post –operative pain.

The prescription:

A prescription is a directive to activity. It specify both nature of the action that will lead to fulfillment of the nurses central purpose and the thinking process that determines it. In this present study prescription is to plan of giving guided imagery.

Realities:

It refers to the physical, psychological, emotional and spiritual factors that come into guided imagery in a situation involving nursing action. The five realities identifies by widen Bach are agent, recipient, goal means and frame work.

Agent:

Agent is the practicing nurse and is characterized by personal attributes, capacities and most importantly, commitment and competent in nursing. In this study the agent is the investigator.

Recipient:

The recipient is the one who receives nurse's actions on the one on whose behalf the action is taken. Here the recipient is children with post-operative pain.

Goal:

The goal is the desired out-come the nurse wishes to achieve. Here it is reduction of post-operative pain after the intervention of guided imagery.

Means:

Means comprise the activities and devices through which the practitioner is enabled to attain her goal. The means include skills, techniques, procedure and nursing practice.

Present study phase like identification ministration and validation are used to achieve the goal.

The frame work:

The frame work consists of human, environmental professional and organizational facilities within which nursing is practiced. Here the setting of the study is considered as frame work (Sarala Hospital, Kerala)

Nursing practice:

It has 3 components (1) identification of the child need for help (2) ministration of the help needed and 3) validation of that the action taken was helpful to the child.

PRESENT STUDY

Identification

Assess the post operative pain by pre-test with FLACC tool.

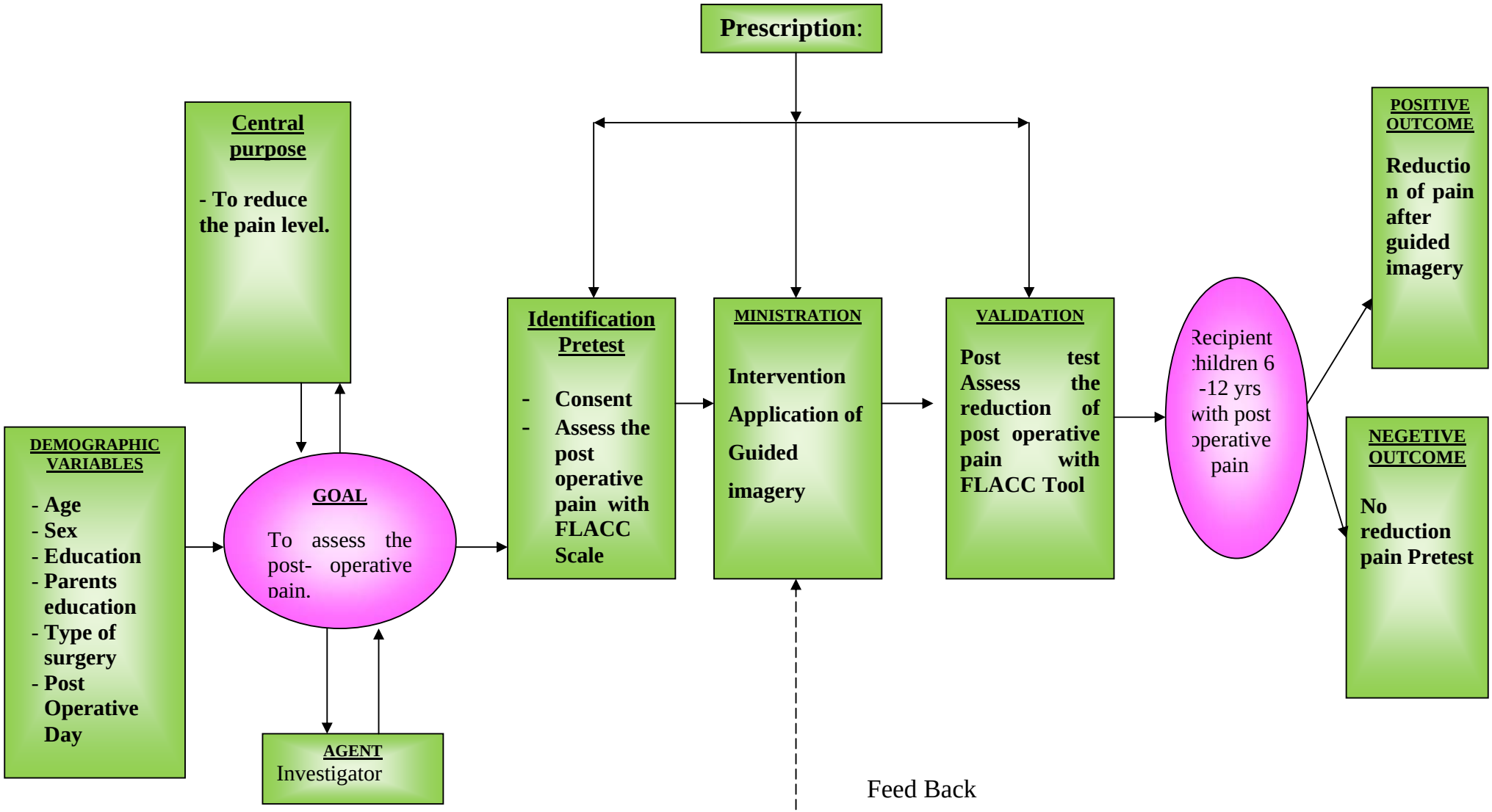
Ministration:

Intervention by guided imagery.

Validation:

Assess the reduction of post operative pain with FLACC tool.

CONCEPTUAL FRAME WORK BASED ON MODIFIED WIDENBACHS PRESCRIPTIVE THEORY



CHAPTER - II

REVIEW OF LITERATURE

Researches generally undertake a literature search to familiarize themselves with a knowledge base. A review of related literature is an integral component of any scientific research. It involves a systematic identification, location, scrutiny and summary of written materials that contain information on her research problem. The scope of literature was reviewed from published journals, text books, internet, Medline to widen the understanding of research problem and method for the study.

The review of literature presented under the following headings.

1. Studies related to pain.
2. Studies related to effects of guided imagery on pain.

Studies related to pain:

Dhari Alwugyan et al (2002) conducted a cross sectional survey among 281 Arab native speaking children. 6-12 years old with acute pain to the emergency room accompanied by at least one adult to study the ability of the children to describe, localize and asses the intensity of their current pain and compare their evolution. With those of their parents, data were collected in Al-Amiri. Mubarak A1 Kabeer, Al Adea Al farwanuja and Aj Jahra, Hospital by intervening children and by giving a self administered

questionnaire to the accompanying adult. Intensity of pain was measured using faces pain scale. Children described their pain using 23 verbal expressions. The results showed that most frequently used words to describe pain were it, hurts and a lot followed by a burning sensation. The most common sites of pain were abdomen, Pelvis and loin. Intensity of pain was associated with birth order and higher member of siblings, lower number of previous pain episode lower family income and lower education level of mother. No relationship was found between self reported pain intensity and nationally area of residence; gender a father's educational level. There was no agreement in pain intensity assessment between parents and children. They conducted that children and site. The faces pain scale was easy to administer and useful in meaning the intensity of pain.

Vannesa Unsworth (2003) Started they as day care surgery increase. One needs to improve the management of pain in children at home. This study revealed the use of self report pain scale would result in children receiving more analysis. Eighty eight children aged 4012 years undergoing tonsillectomy, whose parents agreed that they could participate were randomly assigned into two groups. Groups received the routine post operative advice and 3 day prescription or paracetamol, Ibuprofen and codeine In addition Group B used to Wong Baku face pain scale. Seventy

two children completed the study. There was no difference in the total number of analgesic administered to children in two groups. It proved that a self report pain scale does not improve the post operative management of pain in children at home.

C.J. Newman (2003) conducted co relational study among 122 Thai children (4-15 yrs) among them half were HIV infection children in out. Patient to assess the validity of three commonly used pain scales. The result showed the three pains scale were significantly correlated with one another on overall analysis. Analysis of sub groups was those correlating the two fair pain scales. The study suggested that the three investigated pain scales have sufficient convergent validity and agreement for clinical use in Thai children, but they discrepancies between the pains scales are to be expected in a significant proportion of children. These tools can be used to evaluate pain intensity in Thai children.

Lara J. Spagrud et al., (2003) study suggested that faces pain scale revise (FPS-R) is a useful self report tool for assessing pain intensity in preschool and school age children who may not be able to use other pediatric self report pain Measurement tools, such as visual Analog or numeric rating scales.

Jacqueline A (Ellis (2004) conducted a study to provide baseline description of the prevalence of pain and pain management strategies in pediatric hospital and to compare the prevalence reports in the literature. Two hundred and thirty seven children ranging in age Two hundred and 37 children ranging in age from 10 days to 17 years and 223 parents participated in and the survey an 5 inpatient units. The results suggested that more than 20% of the children had clinically significant pain at each 0f 2 hr intervals and I had pain scores of 5/10 or greater for the majority of the study. At least 50% of the children were found to be pain free during the 4 intervals and there was high level of agreement between parents and children's pain intensity ratings. One hundred and fifty seven children had medication ordered and 80 children had no analgesics ordered. These were no significant correlation between the characteristics of the patients and the amounts or types of medication given.

Malviya (2004) conducted a comparative study on pain assessment and management practices on children with and without cognitive impairment undergoing spine fusion surgery. The medical records of 42 children were reviewed and data related to demographic surgery pain assessment and management and scale effects were the results reveled that fewer compared to those without CI $p< 0.002$ self report was used for 81%

of pain assessment in child with CI white a behavioral tool was used for 75% of assessment in cognitively impaired children. Children with CI received smeller opioid doses on PODL-3 compared to those with CI(p< or =0.02) further more children without CI received patient muse controlled analgesic for more post operation days that children with CI (P=0.02) conducted that there is a discrepancy in pain management practices in children with and without CI following spine fusion.

Cheryl A Gilbert et al., (2005) did a study to determine whether measurement system based on facial expression would be useful in assessment of post operative pain in going children. One hundred children between the age 13-74 months are video taped for a maximum of an hour after arrival in the post anesthetic care unit at British Columbia's children hospital. Samples were randomly selected from each 2 minutes time period lapsed during the hour following surgery. The result demonstrated that the CICS saves as a valid measurement tool for persistent pain in children.

Bough ton et al (2006) conducted a study to determine whether the regular assessment of children's pain would improve their pain management and pain would improve their pain management and post operative progress among children aged 5-17 years measured their pain every 4 has post operatively using Wong Baker Faces rating scale. Out comes regarding

amount of analgesic s given; subjective pain repots time and progress of ambition and length of hospital stay were compared with data from a retrospective chart review of control group. The sample size was 50. The results reveled that no statistically significant differences in these variable were found. An important clinical finding was that despite all children prescribed PRN analgesic orders. One fifth number of the children received no pain relief intervention.

Markel (2007) did a study to evaluate the reliability and validity of the FLACC pain assessment tool with incorporates five categories of pain behaviors facial expression, leg movement, activity, and cry and consol ability. Among 89 children aged 2 months to 7 years. Who had undergone a variety of procedure was observed in the post anesthesia care unit (PACU). The tool used was found to have high interlayer reliability and the validity was also supported by the correlation with the scores assigned by the objective pain scale and nurses global ratings of pain. Thus the FLACE provides a simple frame work for quantifying pain behavior in children who may not be able to verbalize the presence or severity of pain. The result Among 89 children indicated that the FLACC pain assessment tool is valid and reliable tool.

Studies related to effects of guided imagery on pain.

Huth. M.M (2004) conducted a study on imagery reduce children's post- operative pain. Seventy –three children age between 7-12 were selected among those thirty-six children randomly assigned to the treatment group watched a professionally developed video taped on the use of imagery and then listen to a 30 minutes audio tape. Imagery approximately one week period to the surgery. The rest of 37 children in the attention control group revealed standard card. Pain and anxiety were measured at each time point in both groups. The pain was measured with facial affective scale (FAS) and anxiety was measured M.M (2004) conducted a study on imagery reduce children's post- operative pain. Using the state limit anxiety inventory for children (STAIC) MANCOVA was used for analysis. The result showed that there was a significant reduction in pain and anxiety among children who received guided imagery.

Wegdert J.A. and Biky A.H (2006) evaluate guided imagery as treatment for recurrent abdominal pain in children. Twenty two children age 5-18 years were randomized to learn either breathing exercise alone or guided imagery with progressive muscle relaxation. Pain thus hold was increased in children. The researcher conducted that through unfamiliar to

many pediatricians. Guided imagery is a simple, non invasive therapy with potential benefit for treating children with recurrent abdominal pain.

Lambert S.A (2006) conducted a study on the effect of guided imagery on the post operative course of children at university hospital of Cleveland. Fifty two children were randomly assigned to an experimental or control group. The experimental group was taught guided imager and control group received ordinary treatment. The result levels that there was significantly lower post operative pain rating shorts hospital stays owned for children in the experimental group then control group. This study demonstrates the positive effects of guided imagery or the pediatrics surgical children.

Seri AM (2007) investigated the effect of guided imagery in cardiac surgery at Invoke Hospital USA. The cardiac surgery team implemented a guided imagery progress to compare cardiac surgical out comes between two groups of clients with and with out guided imagery. The investigator conducted the guided imagery is now considered complementary means to reduce anxiety pain and length of stay among cardiac surgery patients

Clin pediatr (2007) Clinfew effective therapies are available for children with recurrent abdominal pain. Relaxation and guided imagery have been shown to impact the automatic nervous system, which is altered in

clients with functional gastro intestinal disorders. They were trained in relaxation and guided imagery during 4 weekly 50 minute sessions.

Annu Rev Nurse (2007) for the past several decades, papers in the nursing literature have advocated the use of cognitive intervention in clinical practice. Increasing consumer use of complementary therapies a cost-driver health care system and the need for advance based practice all lend urgency to the validation of the efficacy of these interventions. This review focused specifically on guided imagery interventions studies identified in the nursing, medical and psychological literature published between 1966 and 1998. Include were 46 studies of the use of guided imagery for management of psychological and physiological symptoms.

CHAPTER III

RESEARCH METHODOLOGY

This chapter comprises the methodology for the study, the research approach, design for the study setting, sample, technique of data collection, the pilot study and plan for analysis of the data and protection of human subjects.

The study was designed to determine the effectiveness of guided imagery in reducing post operative pain among children in Sarala Hospital Trivandrum.

RESEARCH APPROACH:

Quantitative research approach was adopted in this study.

RESEARCH DESIGN:

The research design used for this study was pre- experimental one group pre test and post test design.

O1 X O2

O1	X	O2
Pre test	intervention	Post test

SETTING OF THE STUDY

The study was conducted at Sarala Hospital Trivandrum, Kerala. It has been considered as one of the specialized institutions that provide opportunities for education, research and health care including child health. It is 250 bedded hospitals and has 100 beds in pediatric ward. Pediatric wards have been composed of two sections pediatric medical and surgical. Pediatric surgical ward bed capacity is 50, post operative bed - 25, observation bed -15 and emergency bed -10. About 10-25 children visit surgical out patient daily and 10 major and 15 minor cases are operated in every other days.

POPULATION:

The target population of this study is children with post operative pain.

SAMPLE:

It consists of 60 children between (6-12 years) who underwent surgery and admitted in post operative ward, who fulfilled the inclusion criteria.

CRITERIA FOR SAMPLE SELECTION

Inclusion criteria:

- Children who are willing to participate in the study.
- Both male and female children.
- Children underwent major and minor surgery.
- Children admitted in post operative ward.
- Children from the 2^{nd} 3^{rd} and 4^{th} day of surgery.

Exclusion criteria:

- Children who are not willing to participate in study.
- Critically ill children.
- Children who are not co-operative.

SAMPLING TECHNIQUE:

Convenient sampling technique was used in this study to select the sample.

SECTION AND DEVELOPMENT OF TOOL:

The tool is a written device that a researcher uses to collect the data. After a careful review of literature the investigator identifies a standardized tool to assess the pain which is called FLACC pain assessment scale. However the demographic variables were identified and developed by the investigator.

DESCRIPTION OF THE TOOL:

The study tool consists of two sections

Section I : Demographic variable.

Section II : FLACC pain assessment scale.

Section I: Demographic Data:

The first part of the instrument, demographic data consisted of questions related to demographic variables such as age, sex, religion, type of surgery and number of post operative day.

Section II: FLACC pain assessment scale:

Merkal et al (1997) developed FLACC pain assessment scale to assess post operative pain in children. The acronym FLACC represents five categories face, leg,

activity, cry and consol ability. The pain was assessed using observation method responses in each category are scored between 0 and 2 for a max total score of 10.

SCORING PROCEDURE:

Scoring Key	**Interpretation**
0-3	**Mild**
4-6	**Moderate**
7-10	**Severe**

VALIDITY:

In order to ensure content validity, the tool was submitted to five experts in the field of pediatric nursing along with the blue print, for demographic variables and FLACC scale was not given for validity since the tool is a standardized tool After establishing the validity, the tool was translated in to Malayalam and again translated in to English to validate the language.

RELIABLITY:

Reliability refers to the accuracy and consistency of the measuring tool. The test, retest method was used to establish the reliability of structured tool (FLACC). The reliability coefficient was found to be $r=0.8$ ($P<0.001$).

PILOT STUDY:

The pilot study was conducted in Sarala Hospital, Trivandrum, at Kerala. Pilot study was conducted on 6 children (underwent surgery) who fulfilled the inclusion criteria for sample selection. The pilot study was carried out in the same way as the

final study in order to find out the feasibility of the study. Data were analyzed by using descriptive and inferential statistics and the study was found to be feasible.

DATA GATHERING PROCESS:

The data were collected for a period of 6 weeks in Sarala Hospital, Trivandrum at Kerala. The data were collected from Monday to Saturday (8 am-5pm) every week. Every day 3-4 child's were assessed. The average time taken for pre test and post test were 15 and 30 Minutes respectively in each child.

The 60 samples that fulfilled the inclusion criteria were alone taken for consideration. One pre test was conducted to assess the pain by using the following tool.

1. Demographic variables.
2. FLACC pain assessment scale.

On the same day guided imagery intervention was administered to all the selected samples. After 15 minutes a post test pain score conducted to assess the pain.

DATA ANALYSIS:

- The data were collected, arranged and tabulated. Descriptive statistics (Frequencies and percentage) and inferential statistics (chi square) was used to analyze the study findings.
- To determine the significance difference between post operative pain before and after administering the guided imagery. Paired 't' test was used. A 'p' value of 0.05 levels was considered as statistically significance.

- To find out the association between the pain level and selected demographic variables chi-square test was used.

PROTECTION OF HUMAN SUBJECTS

The study was done after the approval of the dissertation committee. Permission was obtained from the department heads of both pediatrics and nursing to conduct the study. Verbal consent was obtained from the mothers of the subjects and the data collected were kept confidential.

CHAPTER IV

ANALYSIS AND INTERPRETATION

This chapter deals with the statistical analysis this is a meaningful and intelligible manner, Statistical procedure enables the research to organize, analyze, evaluate, interpret and communicate numerical information meaningfully.

Abdella and Lerine (1979) have stated that the interpretation of the tabulated data can bring to light the real meaning of the findings of the study.

The data collected through structured observation (concealment) and were analyzed by using descriptive and influential statistics which are necessary to provide a substantive summary of results in relation to the objectives.

Objectives are

- To assess the level of post operative pain before guided imagery among children in selected hospital at Kerala.
- To assess level of post operative pain before guided imagery among children in selected hospital at Kerala.

➢ To find out the effectiveness of guided imagery among post-operative children.

➢ To find out the association between the level pain selected demographic variables such as age, sex, education, type of family, post operative day, parent's education.

Presentation of data

The data is organized and presented in sections.

Section I

Distribution of Sample on Demographic variables.

Section II

Post operative pain level before guided imagery.

Section III

Effectiveness of guided imagery on Post-operative pain.

Section IV

Post of pain level after guided imagery.

Section V

An association between the post operative pain before guided imagery &selected demographic variables.

Section VI

An association between the post operative pains after guided imagery & selected demographic variables.

Section-1

Table-4.1

Distribution of samples on demographic variables.

S.No.	Demographic Variable	Frequency	Percentage
1.	Age		
	6 – 8 Years	25	41.67%
	8 – 10 Years	24	40%
	10 – 12 Years	11	18.33%

2.	Sex		
	Male	32	53.33%
	Female	28	46.67%
3.	Education		
	1^{st} – 3^{rd} Standard	20	33.33%
	3^{rd} – 5^{th}	27	45%
	5^{th} – 7^{th}	13	21.67%
4.	Education for parents		
	Illiterate	5	8.33%
	Higher Secondary	30	50%
	Diploma	24	40%
	Postgraduate	1	1.67%
5.	Post Operative Period		
	2^{nd} post operative day	47	78.33%
	3^{rd} post operative day	13	21.67%
	4^{th} post operative day	0	0%
6.	Type of Surgery		
	Minor surgery	57	95%
	Major surgery	3	5%

The above table shows that 41.67% (25) were 6-8 years children, 40% (24) were 8-10 yrs children and 18.33% (11) were 10-12 years children.

Regarding the sex, majority 53.33% (32), children were males and 46.67 %(28) were female children.

Regarding the education for parents, majority 50% (30) parents were higher secondary, 40 %(24) parents were Diploma 8.33 %(5) parents were illiterate , 1.67% (1) parent were post graduate.

Regarding the educational, majority 45% (27) child were 3^{rd} -5^{th} std, 33.33%(20) child were 1^{st} -3^{rd} std 21.67%(13) child were 5^{th-} 7^{th} std.

With regard to the surgery, majority 95% (57) of the children underwent-minor surgery, 5% (3%) children underwent major surgery.

Regarding the post operative day, majority 78.33% (47) fall on 2^{nd} post operative day and the remaining 21.67% (13) on 3^{rd} post operative day

Section II

Table - 4.2

Distribution of samples on pain before guided imagery.

Pain level	**Frequency=60**	**%**
Mild	0	0%
Moderate	1	1.66%
Severe	59	98.33%

The above table depicts that majority 98.33% of children experienced severe pain level, 1.66 % experienced moderate pain.

Table: 4.3

Distribution of samples on pain after guided imagery.

Pain level	**Frequency=60**	**%**
Mild	0	0%
Moderate	5	8.34%
Severe	55	91.66%

The above table depicts that majority 91.66% of children experienced severe pain level, 8.34 % experienced moderate pain.

Section – III

Effectiveness of guided imagery between pretest and post test of post operative children.

Table – 4.4

Assessment of pain	**Mean**	**SD**	**"t" test value**
Pretest	7.70	0.70	* 29.39
Post test	5.23	0.89	

* Significant at 0.05 level df =59

"t" value = 29.39

Table shows that there is a significant difference in level of the post operative pain.

Section IV

Association between the post operative pain before guided imagery and selected demographic variables.

Table – 4.5

S.No	Demographic Variables	Pain			
		Mild	Moderate	Severe	Chi- Square
1.	**Age (in Years)**				6.10 NS Df=2 P=0.5
	6-8 yrs	0	0	25	
	8-10 yrs	0	0	24	
	10-12 yrs	0	1	10	
2.	**Sex**				0.27 NS Df=1 P=0.61
	Male	0	1	31	
	Female	0	0	28	
3	**Education**				48.60 S Df=1 P=.00
	$1^{st} – 3^{rd}$ std	0	0	20	
	$3^{rd} – 5^{th}$ std	0	0	27	
	$5^{th} – 6^{th}$ std	0	1	12	
4	**Education of parents**				4.90 NS Df=2 P=0.9
	Illiterate	0	0	5	
	Higher Secondary	0	0	30	
	Diploma	0	1	23	
	Post graduate	0	0	1	
5	**Post operative day**				87.10 S Df=2 P=0.00
	2^{nd} Post operative day	0	1	47	
	3^{rd} Post operative day	0	0	12	
	4^{th} Post operative day	0	0	0	
6	**Type of surgery**				19.27 S Df=1 P=0.00
	Minor surgery	0	1	56	
	Major surgery	0	0	3	

NS- Not Significant

S – Significant

Section V

Association between the post operative pain after guided imagery and selected demographic variables.

Table - 4.6

S.No	Demographic Variables	Pain			
		Mild	Moderate	Severe	Chi- Square
1.	**Age (in Years)**				6.10 N.S Df=2 P=0.5
	6-8 years	0	22	4	
	8-10 years	0	22	1	
	10-12 years	0	11	0	
2.	**Sex**				0.27 N.S Df=1 P=0.61
	Male	0	31	1	
	Female	0	24	4	
3	**Education**				48.60 S Df=1 P=.00
	$1^{st} – 3^{rd}$ std	0	17	3	
	$3^{rd} – 5^{th}$ std	0	12	1	
	$5^{th} – 6^{th}$ std	0	26	1	
4	**Education of parents**				4.90 N.S Df=2 P=0.9
	Illiterate	0	4	1	
	Higher Secondary	0	26	4	
	Diploma	0	24	0	
	Post graduate	0	1	0	
5	**Post operative day**				87.10 S Df=2 P=0.00
	2^{nd} Post operative day	0	42	4	
	3^{rd} Post operative day	0	12	1	
	4^{th} Post operative day	0	1	0	
6	**Type of surgery**				19.27 S Df=1 P=0.00
	Minor surgery	0	53	4	
	Major surgery	0	2	1	

NS- Not Significant

S – Significant

Fig. 4.1 Frequency Distribution of Samples according to their Age

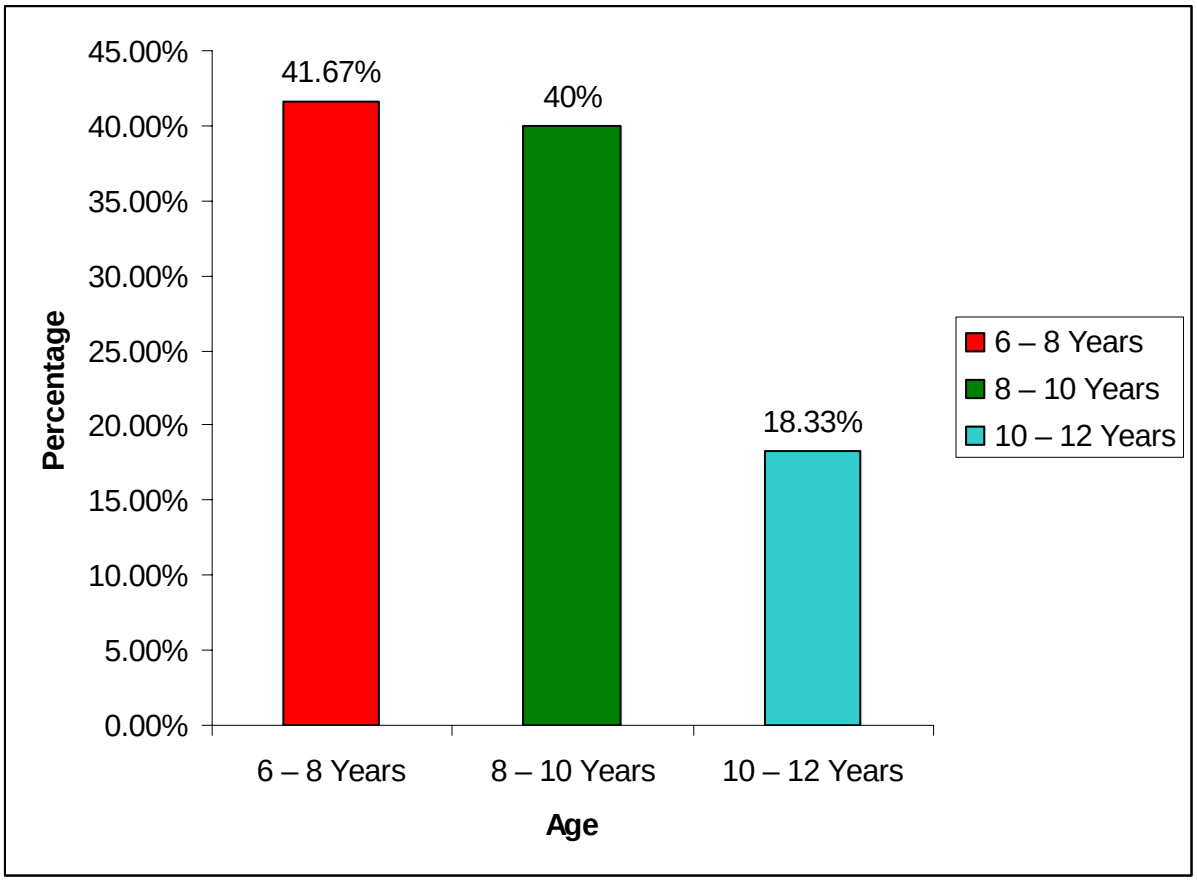


Fig. 4.2 Frequency Distribution of Samples according to their Sex

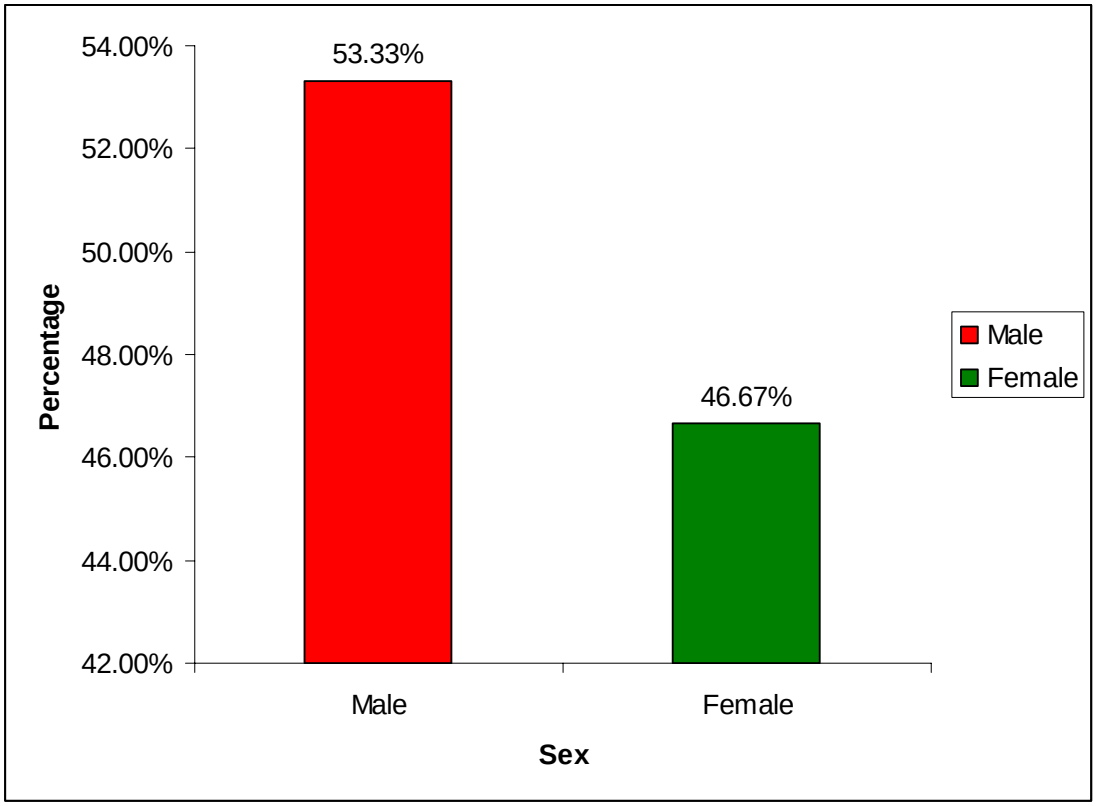


Fig. 4.3 Frequency Distribution of Samples according to their Education

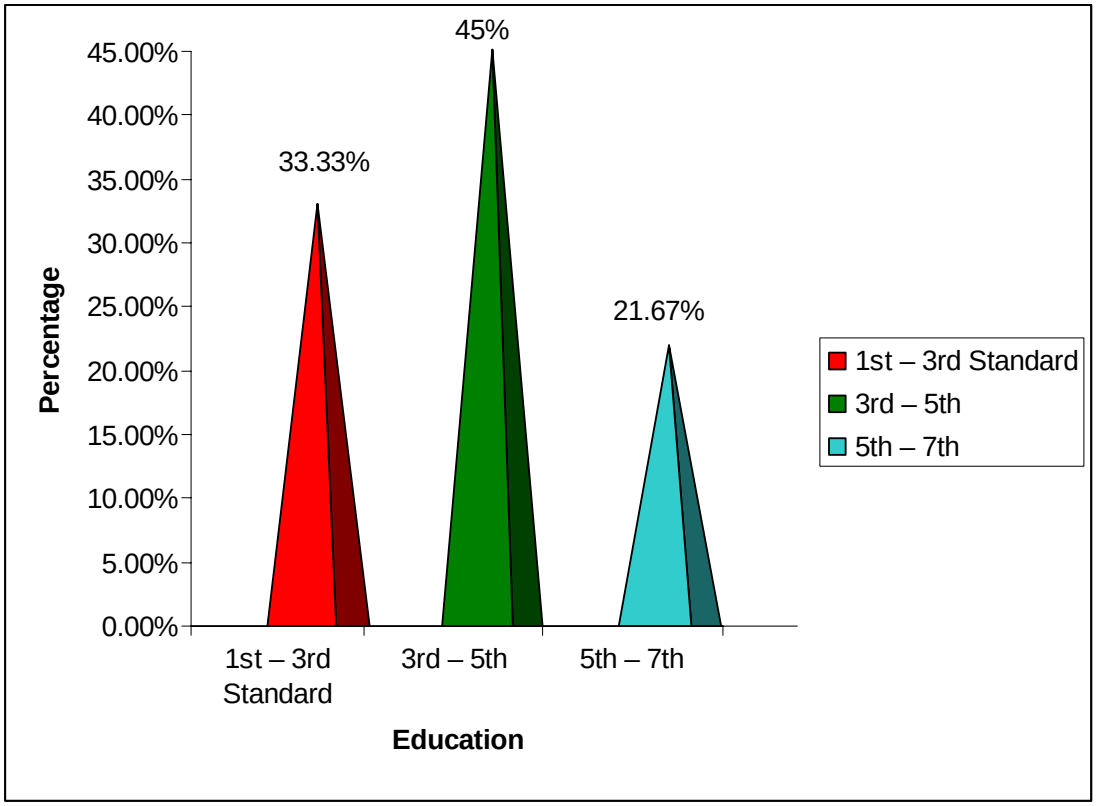


Fig. 4.4 Frequency Distribution of Samples according to their Education for parents

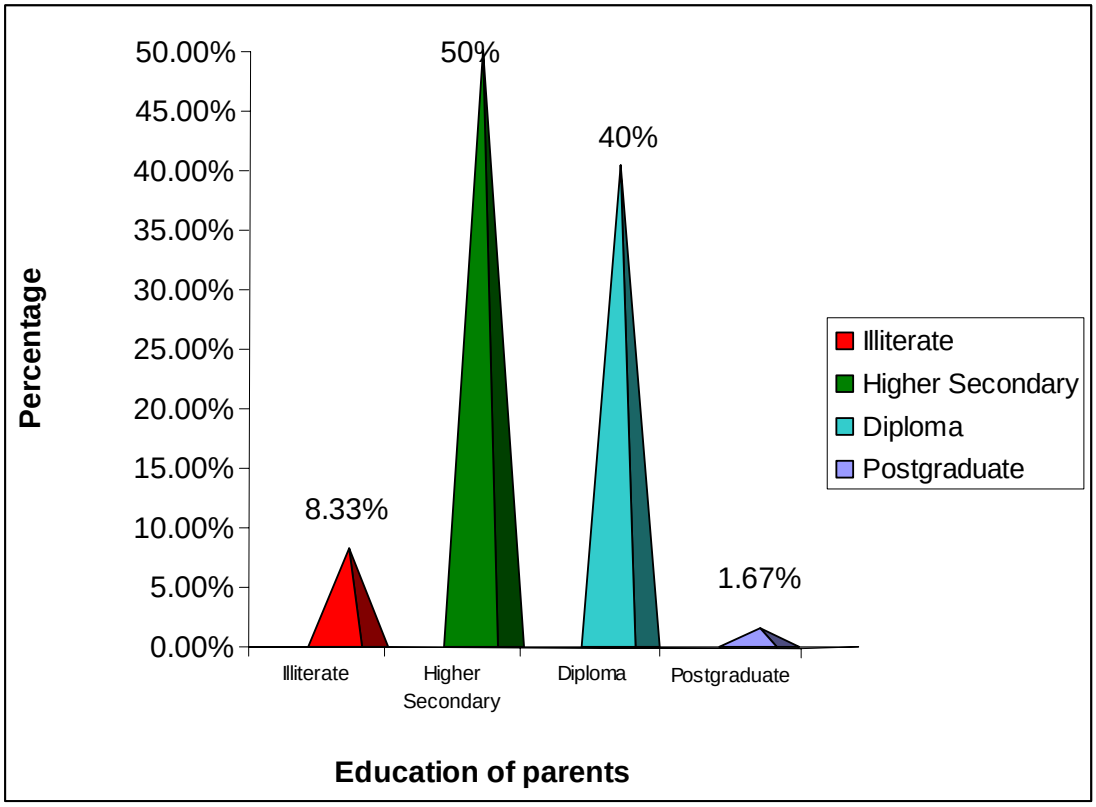


Fig. 4.5 Frequency Distribution of Samples according to their Post operative Period

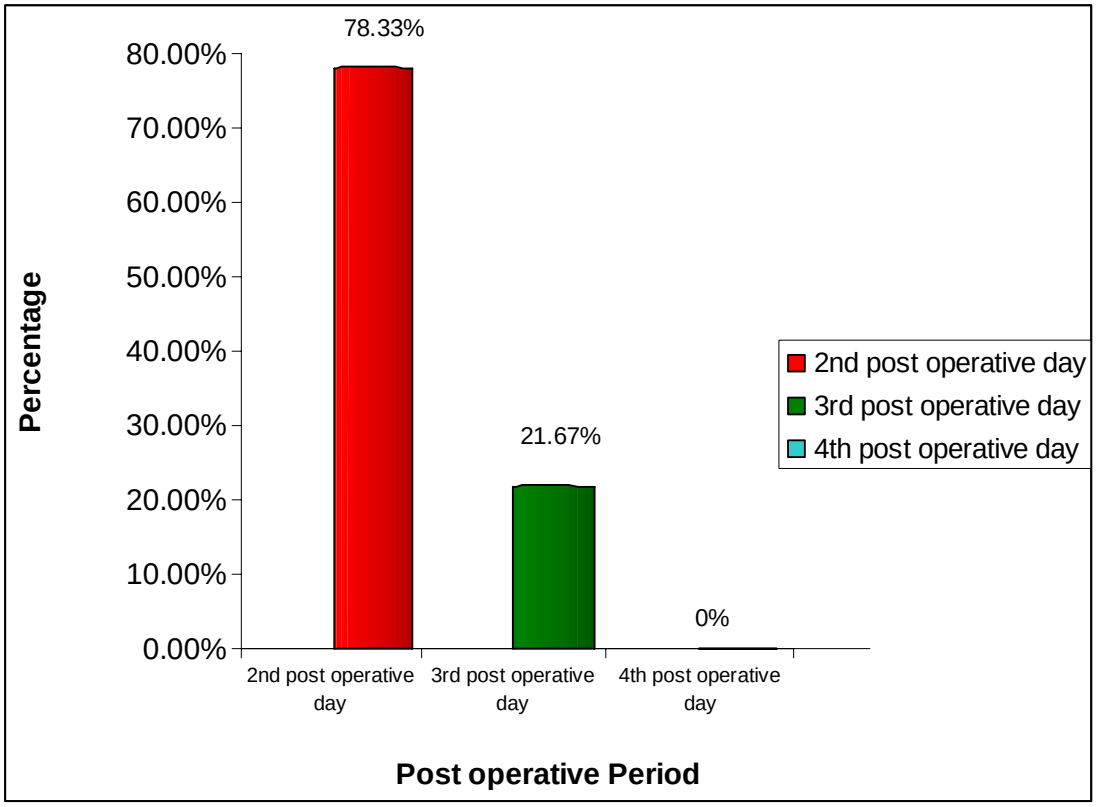


Fig. 4.6 Frequency Distribution of Samples according to their Type of Surgery

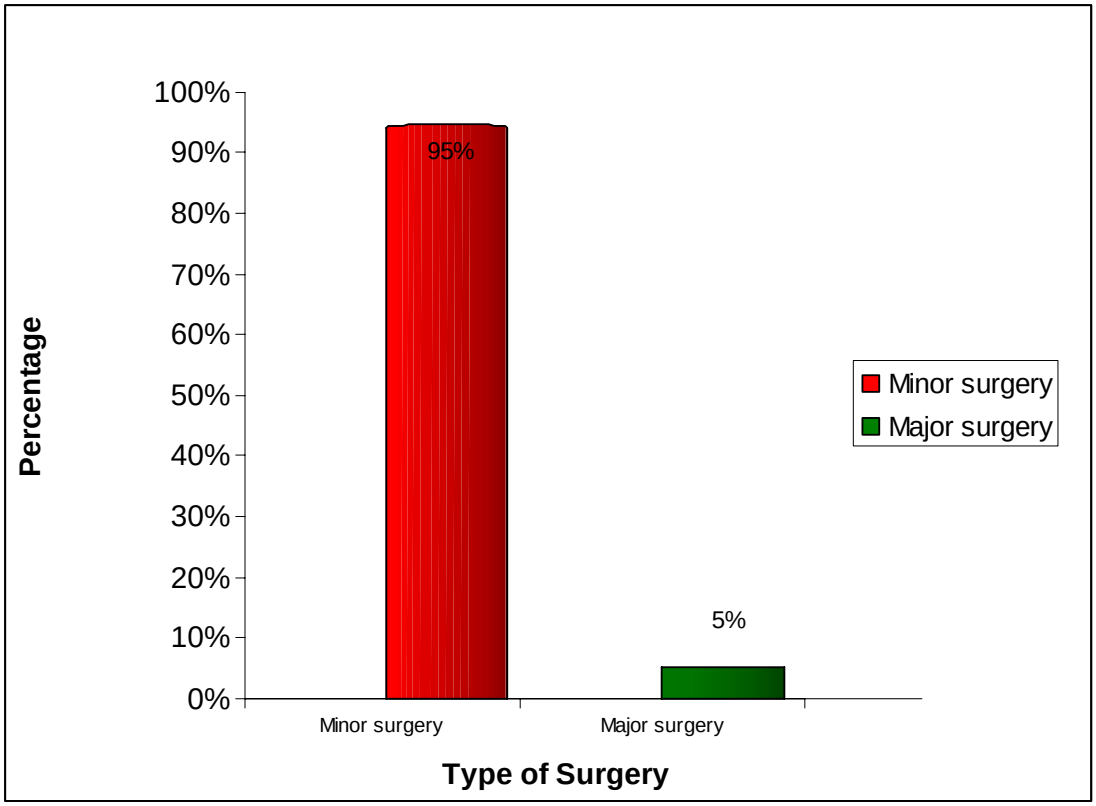


Fig. 4.7 Post operative pain level before guided imagery Distribution of pain before guided imagery

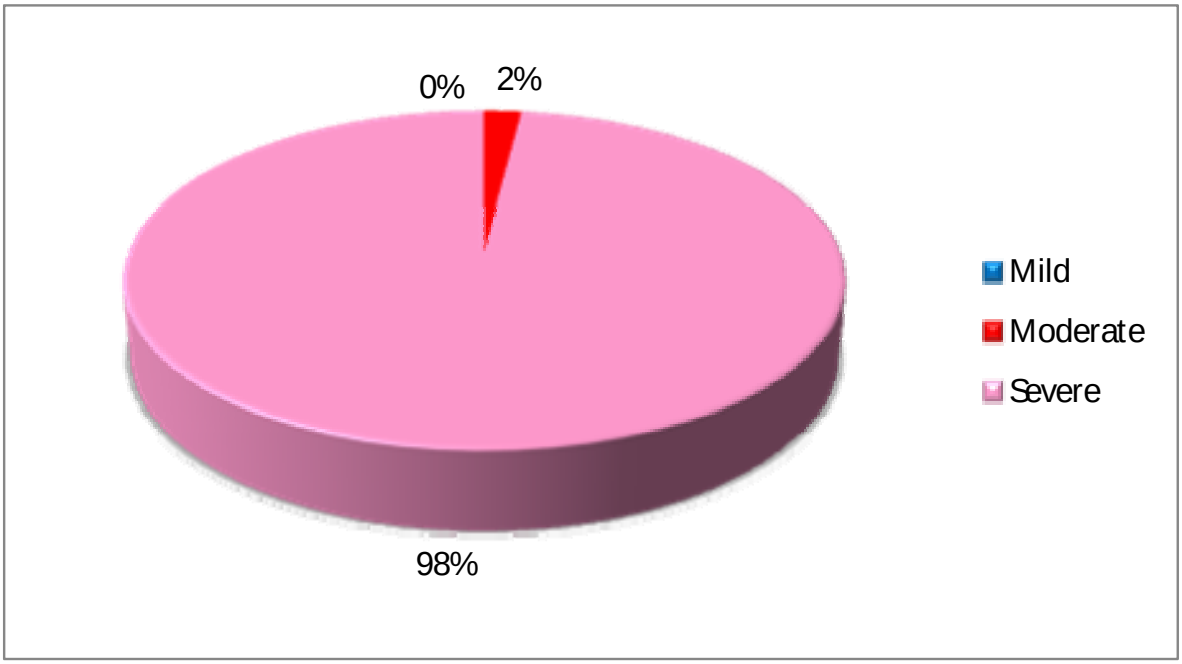


Fig. 4.8 Post operative pain level after guided imagery Distribution of pain after guided imagery

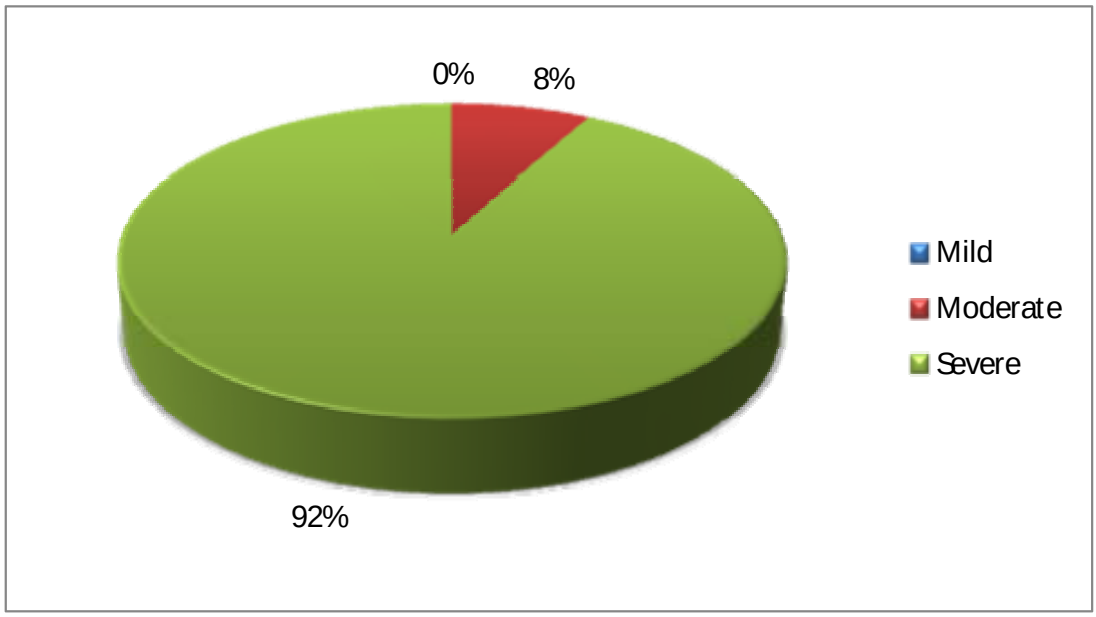
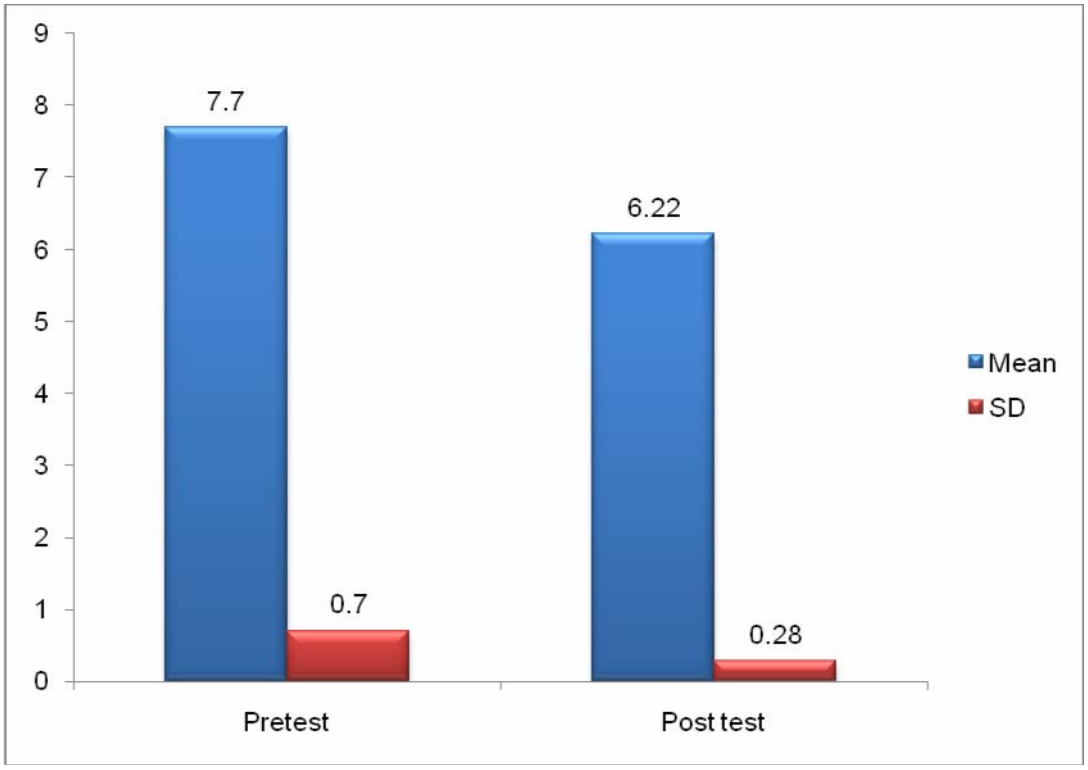


Fig. 4.9 Significance of guided imagery between pretest and post test of post operative children



CHAPTER - V

DISCUSSION

This study was aimed to find out the effectiveness of guided imagery on post operative pain in Sarala Hospital, Trivandrum. The findings of the study have been discussed with reference to the objective and hypothesis and with the research findings of other studies.

The objectives were:

1. To assess the level of post operative pain before guided imagery among children in selected hospital at Kerala.
2. To assess the level of post operative pain after guided imagery among children in selected hospital at Kerala.
3. To find out the effectiveness of guided imagery on reduction of pain among post-operative children.
4. Find out the association between the level of pain and selected demographic variables of post operative children such as age, sex, education level, parent's education, type of family, post operative period.

Discussion of the study

A total of 60 samples that fulfilled the inclusion criteria were selected and data were gathered from them majority 41.67% (25) children were 6-8 years 40% (24) were 8-10 years children and 18.33% (11) were 10-12 years children.

Regarding sex, majority 53.33% (32) children were males and 46.67% (28) were female children.

Regarding the education, majority 45% (27) child were 3rd- 5th std 33.33% (20) child were 1st -3rd std 21.67% (13) child were 5th-7th std.

Regarding the education of parents majority 50% (30) parents were secondary, 40% (24) parents were diploma holders,8.33% (5) parents were illiterate, 1.67% (1) parents was a post graduate.

With regard to the surgery, majority 95% (57) of the children underwent minor surgery 5% (3) children underwent major surgery.

Regarding the post –operative day, majority 78.33% (47) fell on 2nd post operative day and the remaining 21.67% (13) on 3rd post –operative day.

The first objective of the study was to assess the level of pain among post – operative children before guided imagery.

The FLACC post operative pain assessment tool was used to measure the pain level.

Table 2 shows that out of 60 subjects studied a majority of 59(33%) children had severe pain, (1.66%) moderate pain.

Pain an individualized sensation, perception. The meaning of pain is unique to each individual. It may be experienced and expressed differently by different children depending upon their threshold, tolerance capacity into varying degree of intensity such as no pain, mild, moderate and severe.

Hence the researcher assessed the pain responses of children and found that there was considerable difference in the pain scores. In this study level of pain was

assessed by FLACC tool. Which incorporated in behavior categories on their check list (face, leg, activity, cry and consol ability).The present study indicates that majority of the children experienced severe level of pain.

The second objective of the study was to assess the level of pain among post – operative children after guided imagery.

Table 3 shows that out of 60 subjects a majority 55(91.66%) children had severe pain , 5(8.34%) children had moderate pain.

The third objective of the study was to find out the effectiveness of guided imagery on reduction of pain among post-operative children.

Table 4 shows that the mean score of children before guided imagery (n=60) was 7.70(S.D 0.70) and the mean score of children after guided imagery n=60 was 5.23 (S.D 0.89).

For this objective the null hypothesis was stated as follows.

H_o [1]: there will be 3 significance differences in post operative pain among children before and after guided imagery.

The obtained paired value of 29.39 at df=59 is greater than the table value0.05 level of significance. This indicates that guided imagery is effective. Hence the investigator rejected the null hypothesis and accepted researcher hypothesis.

The fourth objective of the study was to determine association between the level of pain and selected demographic variables.

Table 4 shows majority of children between 6-8 years 41.67% experienced severe level of pain. Regarding sex majority (53.33%) was male, education majority

(45%) 3rd -5th standard children. Education for majority (50%) was qualified secondary, majority 95% has undergone surgery and majority of them belong to 2nd post operative day (78.33%).

Ho2 There will be significance between the post operative pain and the selected demographic variables.

The obtained chi-square value is greater than table value at 0.0.5 level. This shows that association between the post operative pain and the selected demographic variables. Hence the researcher accepted the null hypothesis and rejected the research hypothesis.

CHAPTER VI

SUMMARY, IMPLICATIONS, RECOMMENDATIONS AND CONCLUSION

SUMMARY

A study was conducted to determine the effectiveness of guided imagery in reducing the post operative pain among the children (6-12 years) in sarala hospital, Trivandrum, Kerala. The research design of the study was pre experimental one group pre test, post test. A total of 60 children were selected for the study. Non probability (convenience) sampling technique was used to select the children.

The conceptual model of this study was based on widen batch prescriptive theory. In this model the central purpose was to determine the effectiveness of guided

imagery on post operative pair and was implemented according to the realities of situation. Here the desired situation and the prescription by which it is to be brought were considered as an abstract concept which directs action towards an explicit goal.

A structured questionnaire was prepared by the investigator consisting of two parts. Part I consisted of demographic details, part II consisted of the FLACC post operative pain assessment tool.

The gathered data were tabulated, grouped and analyzed, descriptive and inferential statistics (paired‘t’-test, chi-square test) were used for analysis.

MAJOR FINDINGS OF THE STUDY;

Children with Post Operative Pain

- Majority were male children.
- Majority under went minor surgeries.
- Majority of the children belong to second post operative day.
- Over all result shows majority of children experienced severe level of pain before guided imagery.
- Majority of children experienced moderate pain after guided imagery.
- A significant difference was found between pretest and post test pain level.
- Guided imagery was effective in reducing post operative pain.
- Significant association was found between post operative pain and the demographic variables.

IMPLICATIONS FOR NURSING PRACTICE;

- Nurse's role in the health care area is under going a rapid charge. Nurses play pivotal role in management of pain both in hospital as well as in community settings.
- Nurses must practice a holistic approach for pain management.
- Behavioral techniques like distraction, imaginative involvement should be used in the management of pain. They can be used independently or in conjunction with other therapy.
- The nursing personnel have to plan and allot time everyday to provide CD's, pictures for children in order to alleviate pain in the post operative ward.
- Advise parents to bring the children's favorite CD's, pictures to the hospital.
- Imagination can be strengthened for children with the help of nursing students in the ward.

IMPLICATIONS FOR NURSING EDUCATION;

- Pain has been considered as the fifth vital sign. Non pharmacological physiological and physical techniques such as guided imagery distraction technique used to alleviate pain. Need to be incorporated in nursing curriculum.
- Teach the parents towards the importance of guided imagery for children during their hospital stay.
- Conduct group teaching for parents regarding guided imagery, the selection of age appropriate CD's and pictures also should be emphasized.

IMPLICATIONS FOR NURSING ADMINISTRATION;

- Necessary in service education to be provided to the nursing personnel at various levels to make them aware of simple and effective pain coping methods like preparation and distraction.
- Update the nurse's knowledge in to current practice and treatment through work shop and conferences. This will enable them to provide health education holistically to the parents.
- Guided imagery should be insisted to practice by nursing personnel, who are working in the post-operative ward.

IMPLICATIONS FOR NURSING RESEARCH;

- Though many studies are done in this concept in other countries. More number of such studies needs to be under taken in India.
- The study on various techniques of guided imagery should be emphasized to do by the post graduate nursing students of non pharmacological, physiological, physical technique use to minimize pain.

RECOMMENDATIONS FOR FURTHER RESEARCH;

- A similar study can be done with large samples.
- A comparative study could be done on the effectiveness of guided imagery between the adult and children.
- A comparative study among non pharmacological technique on reduction of pain control can be adopted.

CONCLUSION

The study shown that the guided imagery is effective in reducing the post operative pain. Imagination is an integral part of a child's life. It is vital that the nurses work in co-operation with the educational staff and also integrate the components of guided imagery during the routine activity in preparing the children for surgeries and invasive procedure.